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09/776,009	02/02/2001	Michael A. Vyvoda	MA-027	7430

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EXAMINER	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/776,009
Filing Date: February 02, 2001
Appellant(s): VYVODA ET AL.

Pamela J. Squyres, Reg. No. 52,246
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed September 12, 2005 appealing from the Office action mailed January 07, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,008,087	Wu	12-1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 63-66 and 68-70 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wu (U.S. Patent No. 6,008,087).

With respect to claim 63, insofar as the structure is concerned, Wu teaches a wafer having a surface as claimed including:

a plurality of elongated strips of polysilicon (16); and

a plurality of elongated strips of dielectric material (20), the strips of dielectric material alternating with the strips of polysilicon (16),

wherein the surface has been planarized by chemical mechanical planarization, and

wherein a first percentage of total wafer surface area that is polysilicon is less than or equal to 70 percent (≤70%). (See Figs. 6 and 9, col. 3, line 8 to col. 4, line 22).

Product by process limitation:

The expression "wherein the surface has been planarized by chemical mechanical planarization" is taken to be a product by process limitation and is given no patentable weight. A product by process claim directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See *In re Fessman*, 180 USPQ 324, 326 (CCPA 1974); *In re Marosi et al.*, 218 USPQ 289, 292 (Fed. Cir. 1983); and particularly *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985), all of which make it clear that it is the patentability of the final structure of the product "gleaned" from the process steps, which must be determined in a "product by process" claim, and not the patentability of the process. See also MPEP 2113. Moreover, an old and obvious product produced by a new method is not a patentable product, whether claimed in "product by process" claims or not.

With respect to claims 64-66, Wu teaches the dimensions of the silicon nitride pattern 6 (300-3000 Å), the opening 12 (500-5000 Å) and the thickness of the polysilicon layer 16 (200-3000 Å) thus, encompass the claimed first percentage of greater than 50 percent (>50%), less than or equal to 60 percent (≤60%) or less than or equal to 50 percent (≤50%).

With respect to claim 68, the strips of polysilicon (16) of Wu have a shortest dimension (200-3000 Å), thus, less than 500 μm.

With respect to claim 69, as best understood by the examiner, the strips of polysilicon (16) of Wu have a shortest dimension (200-3000 Å) overlaps the claimed range (between 0.25 and 500 μm).

With respect to claim 70, since the first percentage of total wafer surface area that is polysilicon of Wu is less than or equal to 70 percent (≤70%), therefore, the surface of the wafer of Wu inherently can attract enough water to wet sufficiently allowing removal of residual particles therefrom.

(10) Response to Argument

With respect to claim 63, Appellant appears to contend that Wu does not teaches the percentage of the total wafer surface area that is polysilicon is less than or equal to 70 percent, and further asserts that drawings with no scale cannot be relied upon for such evidence.

However, MPEP 2125 clearly states: drawings and pictures can anticipate claims if they clearly show the structure which is claimed. *In re Mraz*, 455 F.2d 1069, 173 USPQ 25 (CCPA 1972). MPEP 2125 further adds: the drawings must be evaluated for what they reasonably

disclose and suggest to one of ordinary skill in the art. *In re Aslanian*, 590 F2.d 911, 200 USPQ 500 (CCPA 1979).

In Fig. 6 of Wu, the polysilicon strips 16 and the dielectric material strips 20 appears to be approximately the same size. The drawing appears to disclose and fairly suggest that the polysilicon and dielectric material are approximately the same size or 50 – 50. Thus the limitation: the total wafer surface area that is polysilicon is **less than** or equal to 70 percent, is met. (emphasis added).

In the disclosure, structures 6 (Figs. 3-6), which are later being replaced by the dielectric materials 20, has a width of about 300 to 3000 angstroms. Another word, the width of the dielectric material 20 is equal to that of the structure 6, which is about 300 to 3000 angstroms. (Col. 3, lines 36-37).

The polysilicon strips 16 has a thickness or width of about 200 to 3000 angstroms.

From the two values, one of ordinary skill in the art should reasonably conclude that the total surface area of polysilicon strips 16 is less than 70 percent of the total wafer surface area. Therefore, the limitations of claim 63 are met.

Appellant further adds Wu is silent regarding the portion of the wafer outside of the area shown in Fig.6.

The above seems to be irrelevant, since the portion outside area is not recited in the claim.

Appellant admits that "simply put, if the surface area of the wafer that includes the resulting surface, shown in Fig. 6, can unambiguously be shown to be 70 percent silicon or less,

then Wu *does indeed anticipate claim 63*. If it is merely possible that the surface area of this wafer is 70 percent silicon or less. (emphasis added).

Since the dimensions of the polysilicon strips 16 and the dielectric material 20, as discussed above, are easily ascertainable by one of ordinary skill in the art viewing both the drawings and disclosure, then Wu does indeed anticipate claim 63, as admitted by the Appellant.

Appellant finally states by way of analogy, consider a novel mortar-and-pestle combination.

Since mortar-and-pestle combination are neither the claimed nor appealed subject matters, a response to the analogy is not warranted.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Anh D. Mai.

Conferees:

Wael Fahmy, SPE W.F

Darren E. Schuberg, SPE